

Encyclopedia of Operations Research and Management Science. Edited by Saul I. Gass and Carl M. Harris. Kluwer Academic Publishers, Dordrecht, The Netherlands. (1996). 753 pages. \$350.00, £248.50, Dfl. 650.00.

Visualization and Optimization. By Christopher V. Jones. Kluwer Academic Publishers, Dordrecht, The Netherlands. (1996). 434 pages. \$129.25, £92.50, Dfl. 240.00.

Contents:

Preface. 1. Introduction. I. A framework for visualization and optimization. 2. People. 3. Text and tables. 4. Graphics and animation. 5. Sound and touch. 6. Hypermedia and virtual reality. II. Visualization and the modeling life-cycle. 7. Conceptual models. 8. Formulation. 9. Algorithm execution. 10. Solution analysis. III. Visualization for optimization. 11. Text. 12. Hypertext. 13. Networks and graphs. 14. Multiple dimensions. 15. Animation. 16. Sound, touch, and virtual reality. 17. Visualization tools. 18. Integration. 19. Research and future directions. Colophon. Bibliography. Author index. Subject index.

Numerical Algorithms with C. By Gisela Engeln-Müllges and Frank Uhlig. Springer-Verlag, Heidelberg, Germany. (1996). 596 pages. DM 68.00 sFr 60.00 (CD-ROM included).

Contents:

1. Computer numbers, error analysis, conditioning, stability of algorithms and operations count. 2. Nonlinear equations in one variable. 3. Roots of polynomials. 4. Direct methods for solving systems of linear equations. 5. Iterative methods for linear systems. 6. Systems of nonlinear equations. 7. Eigenvalues and eigenvectors of matrices. 8. Linear and nonlinear approximation. 9. Polynomial and rational interpolation. 10. Interpolating polynomial splines for constructing smooth curves. 11. Cubic fitting splines for constructing smooth curves. 12. Two-dimensional splines, surface splines, Bézier splines, B-splines. 13. Akima and Renner subsplines. 14. Numerical differentiation. 15. Numerical integration. 16. Numerical cubature. 17. Initial value problems for ordinary differential equations. 18. Boundary value problems for ordinary differential equations. Appendices. A. ANSI C functions. B. Bibliography. C. Index.

Weak and Measure-Valued Solutions to Evolutionary PDEs. By J. Málek, J. Nečas, M. Rokyta and M. Ružička. Chapman & Hall, New York. (1996). 317 pages. \$55.00.

Contents:

Preface. 1. Introduction. 2. Scalar conservation laws. 3. Young measures and scalar conservation laws. 4. Measure-valued solutions and nonlinear hyperbolic equations. 5. Mathematical theory for a class of non-Newtonian fluids. Appendix. References. Author index. Subject index.

ML for the Working Programmer, (Second edition). By Lawrence C. Paulson. Cambridge University Press, Cambridge, U.K. (1996). 476 pages. \$80.00 (hardback); \$32.95 (paper).

Contents:

Preface to the second edition. Preface. 1. Standard ML. 2. Names, functions and types. 3. Lists. 4. Trees and concrete data. 5. Functions and infinite data. 6. Reasoning about functional programs. 7. Abstract types and functors. 8. Imperative programming in ML. 9. Writing interpreters for the λ -calculus. 10. A tactical theorem prover. Project suggestions. Bibliography. Syntax charts. Index.

Lisp in Small Pieces. By Christian Queinnec (Translated by Kathleen Callaway). Cambridge University Press, Cambridge, U.K. (1996). 514 pages. \$49.95.

Contents:

To the reader. 1. The basics of interpretation. 2. Lisp, 1, 2, ..., ω . 3. Escape and return: Continuations. 4. Assignment and side effects. 5. Denotational semantics. 6. Fast interpretation. 7. Compilation. 8. Evaluation and reflection. 9. Macros: Their use and abuse. 10. Compiling into C. 11. Essence of an object system. Answers to exercises. Bibliography. Index.

NetActivism: How Citizens Use the Internet. By Edward Schwartz. O'Reilly & Associates, Sebastopol, CA. (1996). 212 pages. \$24.95 (CD-ROM included).

Contents:

About the author. Acknowledgments. Introduction. 1. Getting connected. 2. Tools. 3. Trolling for information. 4. Advocacy. 5. Neighborhoods. 6. Virtual politics. 7. We, the people. Appendix. Useful Internet sites. Glossary. Index.

Basic Proof Theory. By A. S. Troelstra and H. Schwichtenberg. Cambridge University Press, Cambridge, U.K. (1996). 343 pages. \$49.95.

Contents:

Preface. 1. Introduction. 2. N -systems and H -systems. 3. Gentzen systems. 4. Cut elimination with applications. 5. Refinements. 6. Normalization for natural deduction. 7. Resolution. 8. Categorical logic. 9. Modal and linear logic. 10. Proof theory of arithmetic. 11. Second-order logic. Bibliography. Symbols and notations. Index.